

	European Danube Region Strategy EDRS
Priority	<i>III. Strengthening of Danubian identity and cooperation</i>
Name of the programme	7. Danube Science - Danubian Scientific cluster and research field “Science – Work network!”
<i>The preliminaries, justification and objective of the programme</i>	<p>In the modern higher education institutions of the 21st century the role of scientific research has been significantly strengthened. There is an ever increasing competition between universities at European level, and even at a global level, for quality students. Accordingly, not even the universities of the region can avoid international competition. By the increase of international competition also the importance of efficient cooperation between universities, and the coordinated utilisation of the complementary resources of certain universities, must be increased in order to promote academic excellence.</p> <p>The Danube Rectors’ Conference (DRC) was established by the University of Ulm, the University of Linz and Eötvös Loránd Tudományegyetem (of Budapest) in Vienna in 1983. Currently the network has 51 member institutions from 13 countries. The general objective of the DRC is to develop education and research in the region by building up bilateral and multilateral relations between the member universities. The Danube Scientific Cluster develops cooperation in the field of education and research in order to harmonise the supply in training, and the research fields.</p> <p>There is a traditionally high level bilateral cooperation in the field of research and development between Hungary and Germany as well as Austria, and recently also Romania, which needs to be continued and broadened. The programme must include research fields which have results directly affecting the region and contributing to the sustainable development of the region. There are dedicated inter-university researches focusing on the strengthening of the internal cohesion of the Danube macro-region, and the strengthening of social and economic cohesion, and there are vocational training courses in transportation and logistics that are implemented in the framework of international cooperation.</p> <p>The objective of the programme is to strengthen and broaden cooperation between major universities of the region in the field of education and research, in order to improve the competitiveness and the innovation potential of universities, and also increase the level of contribution of universities to the renewal of the economic development of the region.</p>
<i>The content of the programme</i>	7.1. Broadening of the inter-university cooperations of the Danube Rectors Conference concerning the topics

<i>(subprogrammes)</i>	PhD studies, lecturer and student mobility, climate change and world heritage, in order to improve higher education services. 7.2. Determination of the framework of the Danube Region Common Research Programme (ERANET), and the implementation of the programme. 7.3. Setting up the Danube valley knowledge base and regional scientific cooperation 7.4. Setting up a common inland waterway centre, and the implementation of educational and training programmes on this basis, in the field of river navigation, forwarding and logistics.
<i>Other countries potentially affected</i>	Germany (non-paper: educational, research and scientific cooperation projects), Austria, Slovakia, Slovenia, Serbia, the Ukraine, Romania, Bulgaria, Bosnia-Herzegovina, Montenegro
<i>Obligation (in terms of law etc.)</i>	Commitment of political decision-makers at the Budapest Stakeholder Conference
<i>Complimentarity with the Danube strategy</i>	III. C Educational and training cooperation
<i>Parties affected by the programme (target group, beneficiaries, cooperating parties)</i>	University students, lecturers, scientific researchers, higher education institutions
<i>Vision/effects/results</i>	Due to inter-university relations in the Danube region, thematic specialisation is getting stronger, and a common research field is set up, by which the competitiveness of universities will increase, their impact on the economy will get stronger, and the innovation potential of the economy of the region will get stronger. Regional research strengthens the internal cohesion of the region.
<i>The source of the financing of the programme</i>	European Social Fund
<i>Term of implementation</i>	Continuously from 2012
<i>The level of preparedness of the programme (permits, plans, expected time of start, etc.)</i>	The inter-university cooperation form required for the project (DRC) has been in existence since 1983. The preparation of the programme affecting the common research area requires 2-3 years (setting up ERA_Net for the preparation of the programme). Then the implementation of the programme under Article 169 of the Treaty of Rome requires around 6 years, of which the first phase takes around 12-18 months, and the second phase 4.5-5 years.
<i>Relationship with other projects</i>	Relating priority and measure: III. A. Value and heritage protection, III. B. Cultural cooperation, III. C. Educational and training cooperation projects. Currently running projects e.g. within the following programmes: II. Central Hungarian Regional OP 4.2.1. Liszt Ferenc (Hungarian Academy of Music), the renewal of the centre of the

	European higher level musical education in Budapest, and III. Central European Educational Cooperation (CECE; Austria, Czech Republic, Hungary, Slovakia, Slovenia).
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Name of subprogramme	7.1. The inter-university cooperation projects of the Danube Rectors Conference
<i>Potentially affected countries</i>	Germany, Austria, Slovakia, Slovenia, Croatia, Serbia, the Ukraine, Romania, Bulgaria
<i>Territorial limitation</i>	The universities of the above mentioned countries
<i>Preliminaries, justification and objective of the subprogramme</i>	<p>The higher education network based on the national, regional and international strategy may provide the framework that provides a vision required for the sustainable development of the university of the 21st century.</p> <p>Special attention should be given to challenges concerning the PhD programmes within the three-phase training scheme, and the significance of research. While the main profile of the "teaching university" is basic and master training, the "research university" must focus on PhD training and must produce spectacular results.</p> <p>Research universities must continuously develop and get renewed, and search for better solutions to replace good ones, and must progress towards internationally competitive research by innovativeness.</p>
<i>Obligation (in terms of law, etc.)</i>	Commitment of political decision-makers at the Budapest Stakeholder Conference
<i>Common interests of the Danubian Member States</i>	The conditions of compatibility and interoperability of institutions are provided for as a result of the Bologna reform. Within PhD training, a greater focus must be given to inviting foreign visiting professors.
<i>Parties affected by the subprogramme (target group, beneficiaries, cooperating parties)</i>	University students, lecturers, scientific researchers, higher education institutions
<i>The content of the subprogramme, projects</i>	Inter-university cooperation in the field of PhD studies, lecturer and student mobility, climate change and world heritage.
<i>Vision/effects/results</i>	The research universities have a great responsibility as they should provide geniuses for the future society.
<i>Cost requirement of the subprogramme</i>	Currently not known
<i>The term of implementation</i>	Continuous
<i>The level of preparedness of the subprogramme (permits, plans, expected time of start, etc.)</i>	No permit required

European Danube Strategy EDS	
Name of the subprogramme	7.2. Danube Region Common Research Programme
<i>Potentially affected countries</i>	Hungary and other Danubian EU Member States willing to join (countries concerned) and other countries willing to join
<i>Territorial limitation</i>	Depending on the joining Danubian Member States, probably Germany, Austria, Hungary, Slovakia, Romania, Bulgaria and Serbia
<i>Preliminaries, justification and objective of the subprogramme</i>	<p>On the basis of Article 169 (pursuant to the new numbering: Article 185) of the Treaty of Rome, the Community shall take part in the common implementation of national research and development programmes, or a part of them.</p> <p>Under the 7th Framework Programme for Research and Development the implementation of Article 169 requires that the participating Member States provide their research resources for common research programmes, in which the European Community supports the advancement of EU level scientific, programme management and economic implications.</p> <p>Hungary currently participates in the Eurostars and AAL (Ambient Assisted Living) cooperations, under Article 169, and experience shows that such type of cooperations facilitate the setting up and broadening of international scientific networks, and the harmonisation of national strategies, and thereby the more emphasized representation of the defined common interests.</p> <p>The Baltic Strategy, which is referred to as the sample programme of the Danube Strategy, includes a cooperation under Article 169, called BONUS. We would propose the launch of a similar cooperation under Article 169 within the Danubian macro-region.</p> <p>In the region there are traditionally high level bilateral research and development cooperations between Hungary and Germany and Austria, and recently also between Hungary and Romania.</p>
<i>Obligation (in terms of law, etc.)</i>	<p>Article 169 of the Treaty of Rome: "In implementing the multiannual framework programme the Community may make provision, in agreement with the Member States concerned, for participation in research and development programmes undertaken by several Member States, including participation in the structures created for the execution of those programmes"</p> <p>Accordingly, Article 169 facilitates that a group of Member States launch common research programmes, with the assignment of their own resources, to which also the Commission grants a contribution.</p> <p>The participating Member States must be committed to comply with Article 169, and thoroughly worked out community programmes/priorities and a well organised implementation system are required.</p> <p>Article 169 is built upon the ERA –NET system, whose aim is to develop and strengthen the coordination of national and regional</p>

	<p>research programmes through two specific systems: the "ERA-NET actions" and the "ERA-NET Plus actions". Initiatives launched under Article 169 must comply with the following criteria:</p> <ul style="list-style-type: none"> • relevant to community objectives, • accurate determination of the objectives, and providing for their relevance to the objectives of FP7, • providing for the "pre-existing" basis (existing or running research programmes), • must have added European value, • a critical mass have to be incorporated therein, in view of the size and number of programmes involved, and the similarity of activities covered, • must be efficient, because it is essential for achieving the objectives.
<i>Common interests of the Danubian Member States</i>	<p>The horizontal measure of the Danube Strategy is research and development. The objective is contribution to the sustainable development of the region. This objective should be achieved by improving capacities to respond to challenges, and by trying to find specific common solutions to respond to challenges. By capacities to respond to challenges we mean researches that provide a scientific basis for, and support, decision-making and intervening mechanisms in the field of the policies concerned. The research objectives must be assigned to the 3 pillars of the strategy. As they are not independent but interrelated, it is better to always consider research programmes instead of projects, because this is what guarantees the excellence of researches, the better utilisation of resources and the greatest synergic effects.</p>
<i>Parties affected by the subprogramme (target group, beneficiaries, cooperating parties)</i>	<p>The decision-makers and the persons in charge of the implementation of the R+D policy in the Danubian macro-region (innovation agencies, knowledge centres), the academies, research institutes, higher education institutions in the region, and relating research organisations and enterprises.</p>
<i>The content of the subprogramme, projects</i>	<p>The programme must include research areas whose research results have a direct impact on the region. Such topics are for example:</p> <ul style="list-style-type: none"> ○ Understanding and mitigating the effects of climate change ○ Biodiversity ○ Research in hydro-economy ○ Monitoring and prevention of pollution ○ Efficient water management in the industry and agriculture (water footprint) ○ Integration of the ecosystem and the society ○ Flood prevention ○ River transport ○ Wastewater treatment ○ Water quality ○ Provision of safe drinking water
<i>Vision/effects/results</i>	<p>The programme serving the above objectives is an integrated, interdisciplinary and transnational programme. It is integrated because</p>

	<p>it includes not only research and technological development but all elements of the knowledge triangle; and covers innovation, education, training, mobility and dissemination activities. Therefore it is capable of providing a very high level of visibility, which is extended not only to the Danubian region but beyond, due to the excellence considerations. The programme has two phases:</p> <p>1/ The main purpose of the strategic phase is to set up the Strategic Research Agenda (SRA) with the involvement of the parties carrying interests. This activity requires the active participation of the European Commission because research needs and currently running research projects must be identified, the future challenges, technological possibilities and trends must be analysed, and the programme must be positioned in view of the existing tools. The activities require the identification and involvement of the parties carrying interests, and the application of the foresight method. This activity is time and cost consuming. The preparation of the Baltic Maritime Research Programme used the FP6 ERA-NET tool. Also the Danube programme may be prepared by using the ERA NET or the CA (concerted action) tool. The Baltic programme used so-called orientation workshops for setting up the SRA.</p> <p>2./ The purpose of the implementation phase is to implement the SRA. It means the preparation and issue of common calls for tender, the selection of the winning bids, and the monitoring of the running projects. The programme must be evaluated, too. In addition to research projects, there may be also projects developing the research infrastructure and human resources.</p>
<i>Cost requirement of the subprogramme</i>	Around EUR 80-100 million, depending on the commitment of the participating states.
<i>The term of implementation</i>	Preparation takes around 23 years (setting up the ERA-Net for the preparation of the programme). Then the term of the programme under Article 169 is around 6 years, of which the first phase takes 12-18 months, and the second phase takes 4.5-5 years.
<i>The level of preparedness of the subprogramme (permits, plans, expected time of start, etc.)</i>	In this case the preparation of the draft programme takes 2-4 months. Then it would be advisable to set up an ERA-Net for the first phase (strategic phase) that would take 2-3 years. On this basis the cooperation under Article 169 would be set up for around 6 years.

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Name of the subprogramme	7.3. Danube valley knowledge base and regional scientific research
<i>Potentially affected countries</i>	Germany, Austria, Slovakia, Slovenia, Croatia, Serbia, the Ukraine, Romania, Bulgaria
<i>Territorial limitation</i>	See above
<i>Preliminaries, justification and objective of the subprogramme</i>	The Danube Strategy is not yet part of common thinking or any common or higher education curriculum. The most efficient way to promote it is through the Internet, provided that the content published is scientifically correct and strengthens cohesion and is in a language understandable for the peoples of the region. Leaving the virtual world we could present the contents of the website by travelling across the area.
<i>Obligation (in terms of law, etc.)</i>	The surface will be made available in addition to English, German and Hungarian also in languages that the Danube community specifically considers as necessary concerning the publication of the Strategy in general and the knowledge base in particular.
<i>Common interests of the Danubian Member States</i>	In the interest of participation the advantages of the Strategy should be accepted by a wide scope of the peoples living in the region both at emotional and intellectual level. Field demonstrations always strengthen the cohesion and identity of various parts and communities of the Danube valley.
<i>Parties affected by the subprogramme</i>	The population of the Danube region
<i>The content of the subprogramme, projects</i>	<ul style="list-style-type: none"> ▪ Setting up the Danube institute, whose research objectives shall include the thorough study of the past and future development potential of the region, and especially the issue of how the diverse potential of the Danube region may contribute to the common Europe. ▪ An interactive information source, supported by local demonstrations, operating as a permanent part of the dedicated central website reflecting the scientific background of the Danube Strategy. Both the virtual knowledge base and the local demonstrations facilitate the understanding and social acceptance of the macro-region by the provision of reliable facts, active participation and encouraging calls. Publication of relevant facts, Internet-based and field activities (quiz shows, essay competitions, camping out, cooperations strengthening the Danube theme involving researchers and students, exchange practices), preparation of chapters on the Danube strategy for the curriculum and its dissemination for schools, in particular for the subject "Geography". This subject covers relevant chapters on nature and social geography, as well as examples of and expectations on sustainable usage of the environment. Teachers well prepared in common history should be present at field demonstrations. ▪ The subprogramme must include scientific activities providing

	<p>a professional background for the website. Setting up common projects for regional experts dealing with the Danube region, researches and relating knowledge transfer (conferences and studies) strengthening the internal cohesion of the Danube macro-region.</p> <ul style="list-style-type: none"> ▪ Establishment of the Scientific Research Network of the Balkan (Ecostat) ▪ Exchange programmes, common scientific research, exchange of experience, common training courses, conferences, events, field practices, competitions.
<i>Vision/effects/results</i>	The citizens, workers and entrepreneurs get to know in detail the advantages of the common Danube strategy, and ways to mitigate its disadvantages. As a result most of the population will purposefully support the Strategy. The next common steps of implementation will be set out in the central website to/from which there will be several links in the planned website.
<i>Cost requirement of the subprogramme</i>	Setting up in 3 languages (Hungarian, German and English): EUR 50,000. Updating: EUR 4000 per month until the end of the project, for maximum 5 years. The additional cost of regional scientific cooperations and common researches, grants, conferences: EUR 100,000 .
<i>The term of implementation</i>	From January 2011 to maximum December 2015
<i>The level of preparedness of the subprogramme</i>	The projects do not require special permits.

	European Danube Region Strategy EDRS
Name of the subprogramme	7.4. Common educational, training programmes in the field of navigation, river transportation and logistics
<i>Potentially affected countries</i>	Germany, Austria, Slovakia, Slovenia, Croatia, Serbia, the Ukraine, Romania, Bulgaria
<i>Territorial limitation</i>	See above
<i>Preliminaries, justification and objective of the subprogramme</i>	At the Danube section concerned the transportation policies, the business activities, the planned projects all require the increase of the capacities of inland waterway transport, in which regard the human resources are getting insufficient, that is the existing experts cannot satisfy the growing needs and expected development. The training of experts is time consuming: it takes at least 3-4 years after the completion of basic/medium level studies to train experts that are capable of working independently. Due to the outsourcing of logistical services, and in line with the local and international trends, the service providers are encouraged to set up new systems. It is the bigger companies that are capable of such development. It is required to set up a new (modular) training system, and holding practices at a "base" (multimodal centre).
<i>Obligation (in terms of law, etc.)</i>	Hungarian Logistical Strategy
<i>Common interests of the Danubian Member States</i>	Logistical cooperation is a common interest in both waterways and public roads.
<i>Parties affected by the subprogramme (target group, beneficiaries, cooperating parties)</i>	Enterprises affected internationally in the development of services.
<i>The content of the subprogramme, projects</i>	Common vocational training programmes in the field of river transportation and logistics: <ul style="list-style-type: none"> ▪ Common inland waterway training centre (higher level training of ship designers, operators, mechanics, forwarding integrators) ▪ Development of curricula and implementation of accredited training courses ▪ Study tours and vocational field practices ▪ Development of 3 PL, (4PL) logistical services
<i>Vision/effects/results</i>	Setting up a higher level servicing system based on cooperation between prospering enterprises established in production centres (BILK, Rail Cargo Hungária Zrt., Budapest-Csepel free port, relation to regional subcentres).
<i>Cost requirement of the subprogramme</i>	Around HUF 100 million, while the common training centre will cost HUF 1.5-2 billion
<i>The term of implementation</i>	Continuously from 2012
<i>The level of preparedness of the subprogramme</i>	No permits are required for setting up the projects but existing training cooperations may provide a basis.